Motorists! You'll Find News and Ads That Will Eliminate Your Worries

MOTORISTS' PROBLEMS

Solved for Readers of The News-Times

By WILLIAM H. STEWART, JR.

Motor Department—How can I tell when the air and gas in the carburetor is thin or rich, and what must I do to change it? Is there a successful way to clean the engine of carbon without taking apart and cleaning? B. K.

Symptoms of lean mixture, popping back at carburetor, weak power, almost colorless blue flame at compression cocks. Rich mixture is shown by pungent odor of exhaust, black smoke, jerky action of engine, muffler explosions, red or yellow flame at relief valve. Correcting these troubles depends on the make and model of the carburetor. The oxygen process for removing carbon is one of the best but it requires special apparatus. Most any garage is equipped to do this work for you.

Motor Department—I have an old Ford and I notice in advancing my spark there is a knock in the engine. When the spark is about half way the noise can be heard. I can shove up on the spark and the noise cannot be heard. Please tell me where to find it. Also a few days ago I thought I would try some heavy motorcycle engine oil in my car and I find more power in it than any other oil. Some people tell me that it won't do to use that kind of oil. Please give me your advice about these things. I am a reader in your Motor Department and will take your advice on this line. M. O.

The noise is probably due to piston slap, caused by worn pistons and cylinders, a trouble which can only be removed by regrinding the cylinders and fitting new pistons. If a heavier oil gives you more power, it is because the cylinders are losing compression and the oil makes a tighter seal. Too heavy an oil will not work into the bearings, so it is best to be careful in the matter. Would suggest that you use the grade of oil recommended by the service station.

Motor Department—To settle a bet will you kindly answer this question: How would you proceed to find out the order of explosions on a six cylinder motor which you try for the first time? Kindly state the several ways. Thanking you in advance, I remain, L. T.

You can determine the order of firing of the cylinders by observing the operation of the exhaust valves or intake valves. Turn the motor by hand until the valve of cylinder No. 1 opens and then note the order in which the like valves operate in succession. You can also determine the firing order from the compression. By opening the compression reliefs you can note the order in which the compression takes place in each cylinder in succession. There are three firing orders, namely, 1-4-2-6-3-5 or 1-5-3-6-2-4, 1-3-2-6-4-5.

Motor Department—I would like to get information regarding a difficulty that I am having with my car, and such information you may give in your "Motor Columns" will be greatly appreciated. My car seems to have plenty of power and will run along very smoothly, when all at once she will stop and the engine will cease running and the lights go out. This also happens when the lights are not being used. I do not have any difficulty in starting the car again, and it seems to be recharging all right. Thanking you in advance for any information you may give me in regard to this matter, I remain, E. S.

Evidently a break in the battery wire, either to ground or switch. Go over it carefully, cleaning and tightening the contacts. Look especially for corroded terminals. These should be thoroughly cleaned and covered with cup grease.

Motor Department—I have a Chevrolet late model, and find after just having engine overhauled and radiator flushed out it still heats very much in a short time. Please give me remedy and oblige. G. K. SUNDAY MOTORISTS—2—Knob

Flushing a radiator and water jackets does not remove the scale and slime. Take two pounds of washing soda, dissolve in hot water and pour into radiator being careful to strain through cheesecloth to remove any foreign matter. Then run car as usual all day and drain cooling system. Refill with fresh water and drain again the following day to remove all traces of the chemical. If the engine has just been overhauled the pump should be in good condition. This will be shown by heat descending in radiator. If bottom is cold while top is hot, the pump is not working. Also make sure that all hose connections are good.

Motor Department—Kindly let me know if I can use paint or enamel to paint engine of automobile. Also please let me know what causes white specks like salt grains in circulation system. I use spring water, not city water. Thanking you in advance, I remain, READER.

It is not advisable to use ordinary paint on the cylinder castings. A thick coat of paint will prevent radiation. Supply stores carry in stock a thin cylinder paint which has no injurious effect. Would suggest that you use this. It is not advisable to use spring water in the cooling system. This water contains minerals which will form a scale or deposit in the water jackets and radiator. It is best to use soft water, preferably rain water.

Motor Department—I have a 1916 car with a 12-volt battery made by a prominent manufacturer. When the water is put in the battery, enough to cover the plates, and top put back, more water boils out through these little holes than I put into battery. Please tell me the cause of the trouble. (The cause of the trouble). The starter will not work and the battery has just been recharged at one of the service stations of the company. Still it will not work as it should. An early answer would be appreciated, as I do not wish to run any chances of ruining the battery. OWNER.

It would seem that battery is overcharging due to voltage regulator not being properly adjusted. If electrolyte is up to its full strength and starter does not work properly, the trouble may be in a poor connection, or in the starter itself. Better have it looked over by an experienced repair man.

Motor Department—Why do the cylinders of my four cylinder motor become hotter when driven at the rate of five miles an hour in first speed than when driven at fifteen miles an hour on third speed? C. K.

Because they do not get the same cooling effect. When travelling at five miles per hour on first speed your engine is turning over faster than when travelling at fifteen miles per hour on high speed. Consequently, the cooling system has more work to do. The slow forward movement of the car prevents radiator and motor being fanned by the same air currents. You can readily see that the car travelling forward at fifteen miles per hour, with revolutions per minute of motor the same or slower, will receive a greater cooling breeze over radiator and engine than the slower moving car. This difference will determine to a large degree the cooling or overheating of engine.

Motor Department—I have heard "stone bruise" spoken of in connection with a tire. Please tell me what is meant by the words, how it occurs, what harm results and anything else of interest in that connection. W. S.

A stone bruise is where the shoe has become pinched between a stone and the rim, rupturing the fabric. This may readily occur at high speed with a partly deflated tire. A stone, root or other hard substance is struck by the wheel. The tire yields and pinches the fabric against the rim. The rubber yields and stretches but the fabric cannot stretch, and so is torn.

There is no indication on the outside that any damage has been done, but sooner or later the shoe blows out at that point. You may demonstrate a stone bruise as follows: Take a piece of old tube, fold a thin cloth four or more times, place inside the tube, put on a solid surface (a flat stone will do) and strike a heavy blow with the edge of a hammer. The tube will not be damaged, but the cloth will be torn where the blow was struck.

Motor Department—I have an old Model four cylinder Buick car equipped with high tension Bosch D4 magneto which sparks at safety gap when cranking to start the engine. Engine starts and runs without trouble or missing, but why does the spark jump at safety gap? It does this especially when cranking the engine when it is cold. Spark plug gaps are all adjusted and wires examined. Is it possible that high compression in cylinders causes this? Why doesn't the magneto kick back in starting with spark advanced while cranking on battery with advanced spark will? READER.

This trouble is due to high compression; close the spark gap in the plugs tightly. Also make sure the safety spark gap has not closed slightly. When cranking with the battery spark advanced the engine kicks back because the explosion occurs before dead center has been reached, but when using the magneto dead center is passed before the full force of the explosion has been developed.

HELPFUL HINTS.

If the magneto gets wet the secondary current will short circuit and the engine will begin to miss explosions. Most magnetos are now covered in such a way that they are called "waterproof," but this is only a relative term. In case engine begins to miss explosions in wet weather the distributor should be wiped dry both inside and outside, and some provision should be made to prevent rain being driven against it.

If above points have been attended to and still the magneto does not deliver a spark, it will be well to remove the collector brush from the collector ring and see if the ring is gummed up by dirt or oil. If it looks dirty, draw a cloth dipped in oil or gasoline over it while some one cranks the engine by means of the starting handle or self-starter.

Now test again for a spark by holding a screw driver on collector ring while engine is cranked rapidly by means of the starter. A spark should jump from screw driver to the metal case. If it does not, the magneto should be removed and sent to a service station. Do not remove it yourself unless you can return it properly, as the distributer and circuit breaker should be in certain relation with the power stroke of No. 1 cylinder, requiring certain technical skill to replace them correctly.

Do not neglect the magneto because you do not understand it. It should have one drop of oil in each oil lead at least once a week. Once a month the distributer head should be removed and both inside and outside wiped clean of dust, using a rag dipped in gasoline. Also draw a piece of fine sand-paper between the points of the circuit-breaker.

If you have a high tension magneto of the usual type you can prevent your car from being stolen by removing the brush which takes the current from the collector ring to the distributer. Or carry a piece of metal, such as a nut, to drop into the safety spark gap. It may be a little troublesome to do this, but the engine cannot be started and so your car is reasonably safe.

Trained Goats Driven By Boy Scouts To Dedicate New Glacier Park Trail

Team Hitched to Wagon to Cover 1,800 Miles in Two Months Time.

ST. LOUIS, Mo., May 27.—A team of domesticated billy goats hitched to a miniature prairie schooner and driven by Boy Scouts, will officially dedicate Glacier Trail by traveling the route from St. Louis to Glacier National park this summer.

Glacier Trail has for its road marker a brilliant colored metal enamelled sign bearing the picture of a Rocky Mountain goat, and Bert Fuqua, secretary and manager of the Glacier Trail association, concluded it would be fitting to formally open the new transcontinental automobile trail by first driving a team of goats over it. Mr. Fuqua already has marked Glacier Trail with the goat road marker from St. Louis to Glacier National park. Before the summer is over the full route will be marked with this striking road sign from Jacksonville, Fla., to the Pacific coast.

The goats that will be used for this novel trail dedication were kids when captured above the clouds on Going-To-The-Sun mountain in Glacier National park. They were trained to harness last year. Mr. Fuqua has converted a Briggs and Stratton Flyer juvenile buckboard automobile into a small prairie schooner for the goats to haul. This unique outfit will be started on its long trip from the Automobile Club of Missouri in St. Louis June 15. A relay of Boy Scouts of Missouri will drive the goats on the first leg of their journey to the Iowa line, and there turn the novel rig over to Iowa Boy Scouts who will drive the team to the Minnesota state line and there be relieved by Boy Scouts of Minnesota. The North Dakota Boy Scouts will take the goats to Fargo and drive them across the Flickertail state to the Montana line where they will be taken in hand by Montana Boy Scouts who will end the journey at Glacier Park Station, the main entrance to Glacier National park.

It will take more than two months for these sturdy goats to make the journey of 1,800 miles with the little rubber-tired prairie schooner.

From St. Louis, Glacier Trail leads through St. Charles, Mexico, Centralia, Moberly, Macon and Kirksville, Missouri; thence on through Oskaloosa, Marshalltown and Mason City, Iowa, and into St. Paul and Minneapolis via Albert Lea, Faribault and Northfield. From the Twin Cities the trail follows the Great Northern railway to Glacier Park via Willmar, Breckenridge, Fargo and Minot, Glasgow and Havre.

PRECEPTORIAL SYSTEM FOR TIRE REPAIRMEN

The famous preceptorial system of education is now a regular part of the curriculum of the Miller School of Tire Repairing, according to announcement made by the Miller Rubber Co. of Akron, O. This method of education so pre-eminently successful in a great eastern university gives to student tire repairmen the opportunity to meet regularly in small informal groups for individual instruction. To make this possible the regular classes numbering 12 men are divided between four instructors.

The four weeks' residence course covering fundamentals of tire repairing is supplemented by a graduate correspondence course until the repairman is thoroughly trained. A course in tire merchandising is the latest to be added. Lectures are followed by class room work. Actual conditions such as exist in any service station are present. The student has the opportunity to test in road wear the tires which he repairs.

TO STANDARDIZE BALL BEARINGS

International Standards to be Established by American Committee.

The American Sectional Committee on ball bearings has taken action which indicates that International ball bearing standards will be established in the near future.

Ball bearings are used more extensively in the United States than in any other country, due to their general use in automotive vehicles. They are being used in increasing number, however, also in industrial machinery, superseding the plain type of bearing.

At the present time ball bearings of the same general type and nominal size are interchangeable. But if these standards did not exist, it would be necessary for service stations to carry in stock a complete line of bearings as manufactured by the different ball-bearing manufacturers as manufactured by the different ball-bearing manufacturers or, if the cost of such a large stock were too high for a service station, it would be necessary to hold a car with a broken bearing out of commission until the right size and make of bearing could be obtained from the manufacturer.

The first ball bearing standards were established by the Society of Automotive Engineers in 1911, S. A. E. Standards having been established subsequently for all the types and sizes of bearings generally used. These standards are not "paper standards," but are adhered to by all manufacturers of ball bearings, the manufacture of odd-size bearings being limited to special applications.

As the exporting of automobiles by American manufacturers has become of more importance, steps were taken to obtain International standardization of bearings so that bearings made by companies situated in any of the large ball-bearing producing countries, such as the United States, Sweden, Italy or Germany, would be interchangeable. Several meetings were held by the ball bearing committees of the different countries and at the two-day session on April 27 and 28 the American Sectional Committee on Ball Bearings favored adopting certain proposals tentatively agreed to by the German and Swedish Ball Bearing Committees. These proposals will necessitate certain changes in the S. A. E. Standards, but only in sizes which are used to a limited extent. It is thus anticipated that within a short time agreement will be reached as to International ball bearing standards.

In sections of the northwest the fruit growers cover the fields with roofing paper, cutting out round holes for the melon hills. It has been found that by this practice all weeds are smothered and there is a big saving in labor for cultivation and irrigation.